

### **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

Claim 1 (Currently Amended): An electron beam lithography method comprising:  
extending widths of a plurality of stripes which divide a region where an electron beam exposure is to be performed, so that the stripes overlap adjacent stripes at boundaries between the stripes, wherein the scan dose of the electron beam for the extended region of a stripe is less than the scan dose of the electron beam for a non-extended region of the stripe, and wherein the scan dose of the electron beam for the extended region of a stripe is reduced in a stepwise manner toward an adjacent stripe and has at least two intermediate steps between the electron beam for a non-extended region of the stripe and a zero scan dose; and

sequentially performing electron beam exposure for each of the stripes.

Claim 2 (Currently Amended): The electron beam lithography method of claim 1, ~~wherein a scan dose of an electron beam in an extended region of a stripe is less than a scan dose of the electron beam for a non-extended region of the stripe.~~ wherein the scan dose of the electron beam for the extended region of a stripe has at least three intermediate steps between the electron beam dose for a non-extended region of the stripe and zero scan dose

Claim 3 (Currently Amended): The electron beam lithography method of claim 2, wherein the scan dose of the electron beam for at least one intermediate step for the extended region of a stripe is half the scan dose of the electron beam for the non-extended region of the stripe.

Claim 4 (Currently Amended): The electron beam lithography method of claim 2, ~~wherein the scan dose of the electron beam for the extended region of the stripe is reduced in a stepwise manner toward an adjacent stripe.~~ further comprising performing a second electron beam lithography step that includes extending widths of a plurality of stripes which divide a region where an electron beam exposure is to be performed, so that the stripes overlap adjacent stripes at boundaries between the stripes.

Claim 5 (Currently Amended): An electron beam lithography method comprising:  
~~extending widths of a plurality of stripes which divide a region where an electron beam exposure is to be performed, so that the stripes overlap adjacent stripes at boundaries between the stripes, performing a first electron beam exposure by extending a width of a first stripe of a plurality of stripes which divide a region where an electron beam exposure is to be performed, so that the stripes overlap adjacent stripes at boundaries between the stripes, and wherein the scan dose of the electron beam for the extended region of a stripe is reduced in a stepwise manner toward an adjacent stripe;~~  
~~moving overlap regions of the stripes; and sequentially performing the electron beam exposure on each of the stripes at least two times.~~

sequentially performing a second electron beam exposure by extending the width of a second stripe of a plurality of second stripes which divide the region where the electron beam exposure is to be performed, wherein the extended regions of the first and second beam exposures are staggered with respect to one another such that the extended region of the first exposure falls within the non-extended region of the second exposure.

Claim 6 (Currently Amended): The electron beam lithography method of claim 5, ~~wherein a scan dose of an electron beam in an extended region of a stripe is less than a scan dose of the electron beam for a non-extended region of the stripe.~~ wherein the scan dose of the electron beam for the extended region of a stripe has at least two intermediate steps between the electron beam for a non-extended region of the stripe and zero scan dose.

Claim 7 (Currently Amended): The electron beam lithography method of claim 5, wherein a scan dose of the electron beam for at least one intermediate step for the extended region of a stripe is half the scan dose of the electron beam for the non-extended region of the stripe.

Claim 8 (Currently Amended): The method of claim 6, ~~wherein the scan dose of the electron beam for the extended region of the stripe is reduced in a stepwise manner toward an adjacent stripe.~~ wherein the first and second electron beam exposures are performed at half a target dose.

Claim 9 (Currently Amended): An electron beam lithography method comprising:

~~extending widths of a plurality of stripes which divide a region where an electron beam exposure is to be performed, so that the stripes overlap adjacent stripes at boundaries between each of the stripes;~~

~~sequentially performing a first electron beam exposure for each of the extended stripes;~~

sequentially performing a first electron beam exposure on each stripe of a plurality of stripes which divide a region where an electron beam exposure is to be performed, wherein each stripe has an extended width so that each stripe overlaps adjacent stripes at boundaries between each of the stripes, and wherein the scan dose of the electron beam for the extended region of a stripe is reduced in a stepwise manner toward an adjacent stripe;

moving overlap regions of the stripes by moving the stripes; and

sequentially performing a second electron beam exposure for each of the moved stripes in a manner such that such that extended regions of the first exposure fall within the non-extended regions of the second exposure.

Claim 10 (Currently Amended): The electron beam lithography method of claim 9,

~~wherein a scan dose of an electron beam in an extended region of a stripe is less than a scan dose of the electron beam for a non-extended region of the stripe, wherein the scan dose of the electron beam for the extended region of a stripe has at least three intermediate steps between the electron beam for a non-extended region of the stripe and zero scan dose~~

Claim 11 (Currently Amended): The electron beam lithography method of claim 10, wherein the scan dose of the electron beam for at least one intermediate step for the extended region of a stripe is half the scan dose of the electron beam for the non-extended region of the stripe.

Claim 12 (Currently Amended): The electron beam lithography method of claim 10, ~~wherein the scan dose of the electron beam for the extended region of the stripe is reduced in a stepwise manner toward an adjacent stripe.~~ wherein the scan dose of the electron beam for the extended region of a stripe has at least two intermediate steps between the electron beam for a non-extended region of the stripe and zero scan dose

Claim 13 (Original): The electron beam lithography method of claim 9, wherein the first and second electron beam exposures are performed at half a target dose.